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ABSTRACT

This paper explores the concept of combining collaborative action research, used in examining teacher behaviors, with group dynamics, used to facilitate new ideas and increase motivation. Specifically, the study examines the effort by one team of middle school teachers to conduct teacher team collaborative research. After reviewing the literature on the history and rationale of both group dynamics and action research, this paper outlines the foundation of the study in the principles of symbolic interactionism. The interactions of the team (with the researcher as collaborator), the understandings they came to through these interactions, and the impact of these understandings on their practice are all examined. Annotated scripts from team meetings are provided, illustrating the group's interaction and collaboration while the teacher-researchers were trying to develop components of a social skills curriculum for their students. Action research was found to be an effective tool for teachers' professional development, with the group aspect of teacher teams conducting such research providing numerous additional advantages. Recommendations for further research include a call for similar studies in a wide variety of environments. (Contains 140 references.) (PB)

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ED 397 005

Teacher Team Collaborative Action Research

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Running Head: TEAM COLLABORATIVE ACTION

Teacher Team Collaborative Action Research

I have become interested in collaborative action research, teachers conducting research in their own classroom with the assistance of university personnel, as a means by which teachers can examine problems associated with their own practice and initiate strategies and techniques to attempt solutions to the problems. The goal of this type of research is to help teachers develop professionally and to allow university researchers to keep in touch with current problems and practical solutions in the classroom. Additionally, I am interested in middle grades education and at this time of strong public concern throughout the nation over quality education, it is significant to note the continued and widespread positive interest in middle level education. Efforts to provide an appropriate education of quality for early adolescents continue unabated with both new middle schools springing up and major efforts to implement middle school concepts on-going in already existing middle schools. I believe that as the middle school concept continues to develop, collaborative action research can be used to help answer questions which inevitably arise in an expanding field like middle level education. An important area of development in the middle school concept is the formation of teacher teams. It is the use of collaborative action research by a middle school teacher team that this study examined.

Rationale

A multitude of adversities threaten the dreams of America's youth. Seemingly from all sides youth are confronted with a myriad of social dilemmas and pressures, including drug and alcohol abuse, Acquired Immune Deficiency Syndrome (AIDS), hunger and poverty, illiteracy, suicide, unemployment and underemployment, crime, environmental pollution, and wars.

Expressions of concern about the future of America's young citizens abound. An almost uniform response by adults and public institutions has been to look to the educational system for solutions. Increasingly, public attention has been directed toward the improvement of all aspects of the educational process, especially those associated with the classroom environment. Efforts to modify the curriculum to attack social problems at an early age have become more and more common. Today, a sense of urgency is evident in the call for schools to help eliminate adult illiteracy by helping youth stay in school. Students at risk of dropping out of school are an immense social challenge.

A parallel social demand has recently emerged in the form of calls for excellence in teaching, emphasizing the critical need for teachers to be effective in meeting the challenge of educating students (National Commission on Excellence in Education, 1983). This mandate has resulted in a surge of interest in a return to the basics with stress being placed on student achievement. While this new found or cyclical interest in education is desirable, not all of its effects are noteworthy. Currently, over one-third of America's youth drop out of school (Committee for Economic Development, 1987; Conrath, 1987). Although the demand for excellence in education cannot be accused of causing the dropout crisis in our schools, it can be criticized for putting more students into the category of being "at risk" of dropping out of school (Bateman, 1985; Levin, 1987). The demand for higher achievement by students has resulted in upgrading standards; however, many school systems have failed to provide the much needed assistance and support to aid low achieving students in attaining the more stringent scholastic goals (Institute of Educational Leadership, 1986). Consequently, youth failing to meet higher

academic standards are placed in jeopardy of failing and eventually dropping out of school (McDill, Natriello. & Pallas, 1987).

In an effort to curb the negative repercussions resulting from the demand for excellence, educators are beginning to seek ways of reducing the dropout problem through early preventative programs geared at developing a positive orientation to school (Institute for Educational Leadership, 1986). This educational plight calls for an examination of teacher effectiveness in an effort to identify teacher behaviors that are most effective in meeting the needs of all students (Duke & Corno, 1981). This study explores the concept of combining collaborative action research, used in examining teacher behaviors, with group dynamics, used to facilitate new ideas and increase motivation. The long term goal of this researcher is to explore the use of collaborative action research as an effective tool in the teacher development process. This lofty goal, however, must begin not only with an examination of the effectiveness of collaborative action research, but with a small enough piece of the educational spectrum to be feasible as a foundation for future research. Increasing opportunities for securing middle level certification are available as more state departments of education realize the importance of adequately trained educators for middle level schools. Therefore, an appropriate place to begin a detailed look at teacher development is in this expanding field of middle level education.

Definition Of Terms

Action Research There are a variety of definitions for action research and the same process is referred to by a variety of terms (i.e. teacher research, teacher inquiry, participatory research, classroom inquiry), but for the purposes of this study "action research" refers to research

conducted in a classroom setting and involving the teacher and students native to that particular setting.

Collaborative Action Research The addition of the word "collaborative" to action research implies, again for the purposes of this study since there are a variety of definitions, that the teacher is provided assistance from outside sources to help with the design and implementation of the research. Assistance for this study came from two main sources, university personnel (research professors and graduate assistants) and the teacher team.

The research in its simplest form, involves the identification of an issue to be researched by the participants, the formation of a plan of "action" in which to resolve the issue, the collection of data in various forms to substantiate the affects of the action, and reflection upon the results of the action. The cycle may be repeated, using the information gained to alter the issue to be researched.

Teacher Team The teacher team in this study refers to the middle school concept of team teaching, in which the four main content area teachers (math, science, social studies, and language arts) work with one "pod" (about 120 students) of students in an effort to provide a coordinated, inter-disciplinary educational environment. The teachers have a common planning period in which they can collaborate with each other and university personnel. In this study, the teachers classrooms were also grouped together at the end of one wing of the school.

Framework

Need for the Study

In the past, action research has concentrated on single teachers, but with the expanding

use of teacher teams, there is a need to modify existing action research techniques to incorporate the use of these teams. Therefore it was the aim of this study to examine the process of teacher team collaborative action research and extend the educational research literature in the area of group action research.

The justification for educational research is the extent to which it helps transform educational practice in schools (Kemmis, 1984). Collaborative action research per se is of little use if it does not improve the teacher's ability to transfer knowledge with understanding to their students. If teachers, as a result of their involvement in action research, begin to reflect critically on their own professional actions and beliefs, then teacher research becomes teacher development. Through a process of self-conscious scrutiny, teachers can theorize their practice, revise their theories in light of reflective practice, and transform their practice into praxis, or reflectively informed changes in their behavior (Carr & Kemmis, 1983). The immediate goal of this praxis is to develop in teachers a rational understanding of their practice and how it applies to the transfer of knowledge to students. This increase in understanding is achieved through systematic reflection on both the unconscious and the deliberate acts which constitute the practice (Oberg, 1986). The ultimate goal behind this type of research is for teachers to understand this form of teacher inquiry, that is, how this reflective process can increase teachers' awareness of their own practice and eventually their capacity to direct it more fruitfully. It is through this process that the epistemological advantages of collaborative action research become apparent. The benefits to the teacher include improved understanding of the teaching process not only with respect to the practical world of the classroom, but also as it relates to the larger theoretical world of the

university. In addition, teachers can address questions specific to the practical needs of their individual classrooms in concert with their own teaching styles and preferences. It is this individualized application of collaborative action research that is so beneficial to teachers. It is a form of teacher development not found in any other milieu of teacher education. For many of us interested in the improvement of education, the benefits to teachers and university researchers are too great to ignore. I believe the extension of collaborative action research to teacher teams is an important expansion of the action research concept. This study intended to meet the need for teacher teams to understand the process of collaborative action research and how it might benefit their unique needs.

Historical Perspective

Since the early twentieth century researchers have identified developmental characteristics of young adolescents, and educators have sought to structure schools, curriculum, and instruction to meet the needs of these middle level students. In spite of these efforts, the Task Force on Education of Young Adolescents of the Carnegie Council on Adolescent Development (1989) determined that we are still "failing" many of our young adolescent students. The Task Force concluded:

> Middle grades schools - junior high, intermediate, and middle schools - are potentially society's most powerful force to recapture millions of youth adrift, and help every young person thrive during early adolescents. A volatile mismatch exists between the organization and curriculum of middle grade schools and the intellectual and emotional needs of young adolescents. Caught in the vortex of changing demands, the engagement

> of many youth in learning diminishes, and their rates of alienation, substance abuse, absenteeism, and dropping out of school begin to rise (pp. 8-9).

Recent research indicates that discrepancies may exist between the curriculum of middle grade schools and the intellectual needs of young adolescents (Anrig & Lapointe, 1989; Elliott, 1990). What is it that is not happening during those middle grade years?

In recent years American education has been a major topic of concern in society. There has been no lack of discussion, writing, or research on issues of importance. In the early 1960's, morals and spiritual values in public education were examined. Court decisions determined many issues and established educational directions, including school desegregation, public transportation for parochial school students, academic freedom, support for religious instruction with public tax money, school prayer, schooling for the gifted, Bible reading in school, and programmed learning (Ehler & Lee, 1964; Kerber, 1962). The 1970's followed with debate over such issues as open-space schools, after school care, women's liberation, and child -centered curriculum (Morrison, 1976). "Back-to-basics" ushered in the 1980's with further analyses on at risk students, the non-graded school, teacher empowerment, the drop-out rate, and parental involvement (Tyler, 1981). The current decade has begun with additional deliberation over decisions of educational policy affecting the direction in which the schools may be headed, but not necessarily based on clear statements about the direction in which they want to go (Cochran-Smith & Lytle, 1990; Zeichner, 1991).

It must be emphasized that the effectiveness of collaborative action research is a function of motivation on the part of the teacher. In almost every report of an action research project,

claims were made about the value of action research in promoting changes in teacher thinking (Noffke & Zeichner, 1987). University researchers benefit as well, Duckworth (1986) emphasized that she always learns from teachers in return and sees the endless variations on how they use what they learn in their own teaching. Tikunoff and associates (1979) reported that every teacher interviewed noted in some fashion that the process of collaborative action research had caused professional growth, greater understanding of important issues, a higher and more powerful level of reflection, and a sharper attention to the complexities of classroom interaction. Henry (1986) quotes teachers from an Australian project, "Using action research in your teaching gives you a different outlook on teaching and yourself ... you move beyond thinking about content to be taught, to how children learn."

These findings point to another, and more important, beneficiary of collaborative action research. Motivated teachers actively engaged in asking questions about their practice and collaboratively implementing and reflecting on answers are creating better learning environments for their students. The ones who benefit the most from collaborative action research are the students themselves. Everything involved in this type of research is directed toward the improved learning, higher motivation, and better socialization of the students.

Current Perspective

During the past decade teacher educators have received many suggestions related to the improvement of education. Suggestions range from restructuring existing schools (Goodlad, 1984) and increasing school curriculum (Goldberg & Harvey, 1983) to developing national standards for teachers (Carnegie Forum, 1986) and restructuring teacher education (Case, Lanier,

& Miskel, 1986). An important variable in all of these suggestions is the teacher. Even the best advise will not result in educational improvements unless teachers in the classrooms believe that recommendations can make a difference and believe that they, the teachers themselves, can successfully implement the changes (Harris, 1989). Crucial to the success of teaching is the teachers' sense of effectiveness. Whether or not teachers believe in their own ability to make a difference in student achievement is related to the classroom environment and the learning that takes place in the class (Ashton & Webb, 1986). In order to improve the education of students it is essential that teachers implement and maintain a supportive environment that is conducive to student learning.

It is in these areas of teacher implementation and effectiveness that collaborative action research are especially useful. Teachers participating in collaborative action research become agents of their own change and the results of their labor are better educated kids. Teachers can use action research to grow professionally, developing skills and competencies which empower them to solve problems and improve their educational practices (Oja & Pine, 1983). When we remove the mystical aura surrounding the practical application of teachers as researchers, they generally discover that not only is it something they can do, but also something they like to do and find professionally and personally rewarding (Glesne, 1991). It is clear that this process does not simply add new knowers to the same knowledge base, but redefines the notion of knowledge for teaching and alters the locus of the knowledge base and the practitioners' stance in relation to knowledge generation in the field (Lytle & Cochran-Smith, 1991).

Purpose of the Study

The original concept of action research came from the work of Lewin (1947) in his study of "group dynamics" where a change (action), an attempt to solve a problem existing in the group, was introduced by the group collaborator and the results of the change were noted. An important aspect of this work was the fact that interaction (dynamics) among the group created new ideas which often accounted for the eventual solution to the problem or the "results" of the change. The interaction (collaboration) of the group was the basis of new ideas and their application. When action research was applied to education the "group" component was lost due to the fact that teachers taught alone. The resulting body of research to date, therefore, primarily concentrates on collaborative action research as it affected single teachers, even if several teachers were used in the study.

The purpose of this study was to examine an effort by a team of middle school teachers to conduct teacher team collaborative action research. The study focused on the interactions of the teacher team (and myself as collaborator), the understandings they came to as a result of the interactions, and how they used these new understandings in their practice.

Theoretical Undergirding

The concern qualitative researchers have for "meaning," as well as other features I have described as characteristic of this type of qualitative research, leads me to discuss the theoretical orientation of this approach. People use the word "theory" in many ways. Among qualitative researchers in education its use is sometimes restricted to a systematically stated and testable set of propositions about the empirical world. My use of the word is much more in line with its use in sociology and anthropology and is similar to the term "paradigm" (Ritzer, 1975). A paradigm

is a loose collection of logically held together assumptions, concepts, or propositions that orient thinking and research. When I refer to a "theoretical perspective," I am talking about a way of looking at the world, the assumptions we all have about what is important, and what makes the world work. Whether stated or not , this research is guided by a theoretical orientation which helps the data cohere, and enables the research to go beyond an aimless, unsystematic piling up of accounts. The theoretical perspective used in this study is "symbolic interactionism." It's discussion follows with my symbolic interactionist perspective and clarifycation of some issues it raises.

Symbolic Interactionism

Symbolic interactionism has been around for quite a while, and Mead's (1934) discussion of the perspective from the standpoint of a social behaviorist is most cited. A variety of social scientists have expanded the perspective (Charon, 1989; Faules & Alexander, 1978; Goffman, 1969; Manis, 1967; Stone & Farberman, 1981) with little agreement about the use or importance of various concepts in it. It is compatible with the phenomenological perspective (Bogden & Biklen, 1992) and researchers in the phenomenological mode attempt to understand the meaning of events and interactions of ordinary people in particular situations. Symbolic interactionism narrows the scope of phenomenology by concentrating on the meanings, actions, and interpretations derived through social interaction.

This study utilizes the theories of Herbert Blumer (1969) since his expansion of Mead's original concepts are most closely related to my theoretical perspective as a participant observer. Blumer suggests three premises of symbolic interactionism. First, human beings act toward things

on the basis of the meanings that the things have for them. Second, the meaning of such things is derived from, or arises out of, the social interaction that one has with others. Third, these meanings are handled in, and modified through, an interactive process used by the person in dealing with the things encountered. Symbolic interactionism views meaning as arising in the process of interaction between people, thus as social products, as creations that are formed in and through the defining activities of people as they interact. It is this premise that is closely aligned with the methodology of teacher team collaborative action research. It is the interaction and emerging interpretation within the collaborative group that results in the observed change. Blumer further emphasizes (p. 6) that symbolic interactionism is grounded on a number of basic ideas, or "root images," which refer to and depict the nature of human groups, interaction, objects, human action, and the interconnection of the lines of action. These root images constitute the framework of this study and its analysis.

Bogdan and Biklen (1992) point out that objects, people, situations, and events do not posses their own meaning, but rather that meaning is conferred on them. The meanings people give to their experiences and their process of interpretation are a product of the individual, and to understand this behavior, we should understand the process by which they are produced. People act as interpreting, defining, symbolic individuals whose behavior can only be understood by having the researcher enter into the defining process through such methods as participant observation.

From the symbolic interactionist's perspective, interpretation is not an autonomous act, nor is it determined by any particular force, human or otherwise. Individuals interpret through

interaction and the construction of meaning. Groups sharing experiences, problems, and background often develop "shared perspectives" constituting "shared definitions," but these meanings are always subject to negotiation. When acting on the basis of a particular definition, participants may have problems, and these problems may cause them to develop new definitions. How such definitions develop, this process of change, was the subject matter of this dissertation.

Methodological Framework

Design

The design of this study is that of a qualitative case study, specifically a particularistic, descriptive, heuristic, inductive inquiry. Key concepts and the general design of this study are based on the ideas and recommendations of Sharan Merriam (1988). The nature of the research questions, the amount of control, and the desired expansion of the research literature were issues considered when deciding that qualitative case study was the most appropriate design for this investigation. A fourth and probably deciding factor was that the study incorporated a "bounded system" (Smith, 1978) in which I could focus on the specific phenomenon of interest, the teacher team conducting collaborative action research. The "bounding" of one team of teachers, teaching one group of students, arranged in one set of classrooms, at one end of one wing of one school was very useful for collecting the thick, rich data desired. Unlike experimental, survey, or historical research, case study does not claim any particular methods for data collection or data analysis (Merriam, 1988). Since this study focused on a case that was "qualitative" in nature, data gathering and analysis techniques characteristic of qualitative research were emphasized.

Case study has in fact been differentiated from other research designs by what Cronbach

(1975) calls "interpretation in context" (p. 123). By concentrating on a single phenomenon or "case," this approach aimed to uncover the interaction of significant factors characteristic to the phenomenon. The case study sought holistic description and explanation. As Yin (1984) observes, case study is a design particularly suited to situations like this one where it was impossible to separate the phenomenon's variables from their context. Wilson (1979), for example, conceptualizes the case study as a process "which tries to describe and analyze some entity in qualitative, complex, and comprehensive terms not infrequently as it unfolds over a period of time" (p. 448). Most appropriate to this study is Becker's (1968) definition of the purpose of a case study "to arrive at a comprehensive understanding of the groups under study" (p. 233).

The general design of this study is best represented by a funnel (Bogdan & Biklen, 1992). The start of the study is the wide end, where we began with good questions that were not too specific. Then we looked for answers that might show us how to proceed and what might be feasible to do. We collected data, reviewing and exploring them, and making decisions about where the data was leading us. As a group, we decided how to distribute our time, who to interview, and what to explore in depth. We put aside old ideas and plans that weren't working, and developed new ones. We continually modified the design and chose procedures as we learned more about the topics we were studying. In time, we made specific decisions on what aspects of the setting, subjects, and data sources we would explore. The work developed a focus, the data collection and research activities narrowed, and the broad exploratory beginnings moved in a more concise direction, like the narrow end of the funnel. The decision to focus on qualitative

case study stems from the fact that I was interested in insight, discovery, and interpretation rather than hypothesis testing.

Sample and Setting

The middle school in which this study takes place is located in an affluent suburb of a major metropolitan city in the southeastern United States. The school has a large population, approaching 1800 students, and is well supported by parents and the community. The student population is unusual in that it is almost a "mono-culture," a group of very similar students, consisting mainly of white, middle class or upper-middle class students. Variations in ethnicity, socio-economic status, and cultural orientation are small. Because of the economic resources and complexities of administration in such a large school, new, innovative programs are a normal part of the curriculum. Currently, research programs are being conducted in the areas of teacher-student progression, "school-within-a-school" communities, in conjunction with the action research projects.

The larger action research project, which was the basis of this study, started during the 1992-93 school year with one team of teachers and expanded to three teams in the 1993-94 school year. I began working with one of the expansion teams in the spring of 1993 in preparation for the action research cycle which we began at the beginning of the 1993-94 school year. The larger project is an ongoing study incorporating "progression teaching" and "school-within-a-school" elements, in addition to the action research component. This report, however, was limited to the teacher team collaborative action research conducted by one team of teachers, beginning in the spring of 1993 and ending after the first cycle of research in December of 1993.

The teacher team (called the Alpha-Omega team) was made up of four experienced middle grade teachers who teach the four subject areas of math, science, social studies, and language arts. Although some of the teachers had worked together on other teams in the past, the 1993-94 school year was the first time they had all worked together as one four member team. One wing of the school was used for the three teams doing research and this team worked at the end of the wing. The classrooms were adjacent to one another and convenient for team teaching. The teachers had their planning period together, which consisted of the first two class periods of the seven period school day. The teachers were friendly , professional, and worked well together.

There were about 120 students, referred to as a "pod," who were taught by the Alpha-Omega teachers. The students were broken up into four classes, having home room with one of the teachers, and then rotated to the four classrooms for their subject area courses after physical education and exploratory classes. The students were sixth graders during the 1993-94 school year and were scheduled to continue with this team of teachers through middle school (seventh and eighth grades). The students had completed elementary school at an affluent local school a few miles from the middle school.

Procedure

Although the project was conceived and overseen by university research professors and the principle and vice-principle of the middle school, I was allowed to conduct the majority of the action research in collaboration with the Alpha-Omega teacher team. For convenience in the discussion, I have broken the procedures up into four chronological phases:

(1) April-August, 1993 Organization and planning

(2) September, 1993 Baseline data collection

(3) October-November, 1993 Action strategies

(4) December, 1993 Final data collection and reflection for cycle one

Phase one began in April of 1993 with an initial meeting of the four Alpha-Omega teachers, the principal and vice-principal of the middle school, the major university research professor, and myself. The general plan and goals of the project were discussed and a basic timeline established. The teachers had a variety of questions and concerns which were expressed and discussed. The next week I met with the teacher team and we discussed action research in general and our project in particular, including the timeline for the first collaborative action research "cycle" (meaning one cycle of planning, action implementation, reflection, and re-planning for the next action). We established a meeting schedule and I made appointments with the individual teachers for in-depth interviews and classroom observations. In the weeks that followed, I interviewed each teacher at length and observed them teaching on several occasions. We met as a group several times, discussed collaborative action research, and began developing individual and group research questions. Over the summer months I provided them with research articles and books on topics of interest or possible research questions. We all attended at least two school social functions together in addition to a teacher workshop and generally got to know each other.

Phase two began with the start of the new school year. We met during pre-planning and finalized the research questions for the project. The group (the four Alpha-Omega teachers and myself) decided to develop one question that we all could work on and one question for each teacher that was of special interest to the individual teacher. Decisions about research procedures

concerning the group question were made by the group, but decisions about the individual question were made only by the individual, although we all could voice our recommendations. An example of these questions and the study questions are discussed as part of the findings section of this paper.

Once the questions had been established, the group decided to each choose five students from their home room to constitute the study sample. Each teacher would study and collect data on these five students (at least) for their individual questions and then the data for the group question would be pooled from all twenty students. The rest of September was spent conducting individual interviews with the students and observing them in and out of classroom settings to establish basic informational data on all twenty students and the four teachers (baseline data) from which to compare any future changes.

Phase three began in October and continued through November, consisting of the actions taken by the group in an attempt to answer the research questions. In each case, possible actions were discussed by the group prior to their implementation, with the group agreeing on actions regarding the group question, and the teachers making the final decisions concerning their own questions. As the weeks progressed, some actions were not effective and were discussed and modified, but the majority of actions were continued throughout the phase. Data continued to be collected throughout the period in various forms including personal logs, student logs and writings, interviews (including parent interviews), observations, surveys, portfolios, and the audio tapping of the group meetings.

Phase four began in December with a repeat of the data collection cycle conducted in

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September. In addition, preliminary reflection and problem solving was begun in an attempt to streamline and improve the procedures for future cycles. Meetings emphasized reflection on the cycle, with discussions about what the teachers had learned and how it might affect their teaching and what their concept of teaching is.

Data Collection

It is important to mention here that there are two levels of data in this study. First, there is the data collected by the group (the four teachers and myself) used to answer the individual and group action research questions formulated by the group. Second, there is the data collected to answer the research question I established for this study. To avoid repetition and confusion, much of the data collected by the individual teachers is not included in this discussion, but is summarized throughout the paper with examples given in the findings section. The data collected to answer the one group question is used as an example of the teacher team collaborative action research process. It should simplify matters to explain that the second level of data includes the first level, but is not limited to it. For example, the audio tapes of the group meetings (second level data) are not used to answer any of the questions formulated by the individual teachers, but are used in discussion of the group question and to answer the research questions for this study. Therefore, from this point on, data collection and analysis will refer to the second level of data collection (all the data). As outlined above, the data collection was "triangulated" by establishing different data sources and collectors. Data was collected by the students, the Alpha-Omega teachers, other teachers, and myself. Most of the data was constantly shared and discussed in the individual teacher interviews and the group meetings, with the exception of the data I was

collecting on teacher change which was saved for the reflection meetings. The various sources of data included: (1) personal logs from the teachers, students, and myself, (2) audio taped interviews (transcribed) of the teachers by me, and of students and parents by the teachers, (3) audio tapes (transcribed) of all group meetings, (4) observations (with field notes) of teachers, students ,and classroom activities by myself and the Alpha-Omega teachers, (5) surveys produced by the teachers, and (6) writings, projects, and portfolios from the students.

Data Analysis

In addition to the data analysis which had been ongoing throughout the project, final data analysis was conducted by myself under the direction of university professors. The techniques, concepts, and procedures from the work of Merriam (1988), Bogdan & Biklen (1992), and Dey (1993) provided the guidelines for the analyses. Analysis became more intensive once all the data were in, even though analysis had been an ongoing activity (Merriam, 1988). Bogdan and Biklen (1992) defined data analysis in qualitative research as :

> the process of systematically searching and arranging the interview transcripts, field notes, and other materials that you accumulate to increase your own understanding of them and to enable you to present what you have discovered to others. Analysis involves working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others (p. 153).

Dey (1993) adds that it:

> involves breaking data down into bits, and then 'beating' [as in making an omelet] the bits

> together ... a process of resolving data into its constituent components, to reveal its characteristic elements and structure (p. 30).

Coding and categorizing proceeded in accordance with the techniques provided by the above authors. Organization and presentation of data for the final research report was derived from the categories of (1) individual teacher characteristics, understandings, and research questions, (2) the group question and group interactions, and (3) the study question along with my discussion, analysis, and reflections. Data analysis, throughout the study and in the final report, did not identify participants. Names and other identifying characteristics were deleted from the records.

Researcher Bias

One bias which I must address is my personal stance "pro-action research." There is no doubt that I believe collaborative action research is a beneficial process for teachers and university researchers alike. Furthermore, I believe that the addition of group interaction by the teacher team to the action research process could increase the benefits of collaborative action research. I believe new ideas and understandings developed through the group interactions, especially in the planning and reflection phases of the action research cycle, might increase the benefits of the process. It is not, however, my desire to be a cheer-leader for teacher team collaborative action research, nor is it a goal of this project. My previous exposure to action research has shown that it is not an effective process for all teachers in all circumstances and the results of this study do not make that claim. This study was limited to an examination of one case, not a discussion of generalizable effectiveness.

Another bias to be considered is my involvement as a participant observer. A participant

observer has been described as one who observes, interacts, and participates in meaningful group activities (Fine & Sandstrom, 1988). "The participant observer gets to see things first hand and to use his or her knowledge and expertise in interpreting what is observed, rather than relying upon once removed accounts from interviews" (Merriam, 1988, p. 88). The researcher "enters the world of the people he or she plans to study, gets to know, be known, and trusted by them, and systematically keeps a detailed written account of what is heard and observed" (Bogdan & Biklen, 1992, p. 2). In this study, I was a participant in the group discussions and the teacher interviews, and an observer of classroom activities. In addition, I interacted as a colleague in planning and reflecting on student and parent interviews, as well as in group discussions.

The design of the data collection and analysis might help limit the effect of my biases. The data collection is structured at two levels in an attempt to better triangulate the process. The first level of data, that data used to answer the individual teacher questions, was collected by the teachers as part of the process of the teacher team learning to conduct collaborative action research in their own practice. They accomplished this task by collecting data on their own research questions in their own classrooms. For most of this first level of the data collection process, I was not even present (the exception being classroom observations). The remaining data, the data used to answer the questions of this study, were gathered by all participants, including myself. For this data collection, I was an active participant and was involved in the examination, discussion, and analysis of the research. Although I was not trying to approach my role as "going native" (Gold, 1958), I did experience pressure on me during the first cycle to be more than an involved colleague, since I was perceived to be the action research "expert."

FINDINGS

The purpose of this study was to examine an effort by a team of middle school teachers to conduct teacher team collaborative action research. The study focused on the interactions of the teacher teams (and myself as collaborator), the understandings they came to as a result of the interactions, and how they used these new understandings in their practice. The larger study incorporated different levels of questions to coinside with the levels of data collection, but for the purposes of this paper, I will limit the discussion to the main research question of the study, the group question developed by the team, and the individual research question of one of the teachers, which follow:

Main Questionof the Study:

What is the process used by the Alpha-Omega group in planning, conducting, and reflecting on teacher team collaborative action research?

Group Research Question: How can we develop interpersonal skills in students and utilize these skills to foster a sense of community?

Individual Question, Teacher # 1: How can I design my social studies classes so that there is a blend of geography, history, and culture?

Because of the cyclical nature of action research, I have framed the findings around the cycles of the action research rather than chronology. In this way I can follow the themes one at a time through the study.

Individual Findings

The study began with several months of planning, including group meetings and individual

interviews of the Alpha-Omega group (myself and the four teachers). During this period we discussed teacher team collaborative action research, the project we were undertaking, the questions for the project, our schedule, and the interviews focused on what the teachers believed related to middle grades teaching and research in the middle grades. The following summarizes the thought processes of one of the teachers during the first cycle, and is the basis for an understanding of how she changed during the collaborative action research process, which is emphasized in the reflection sections.

Teacher #1 (fictitiously named Ann)

Ann has had about five years of teaching experience in the social science content area of middle grades. She has taught only sixth grade at this middle school during her career and during student teaching. She has enjoyed teaching, loved the students at this age, and was especially happy with the school and her teaching team.

During our individual interviews, we discussed what her thoughts and feelings were related to research in the following dialog.

Dan Tell me about how you feel about research.

Ann The word research brings negative thoughts in my mind. I guess it's because I will always think of it as being very time consuming and very rough. But then again, I have very few experiences in it. But from having studied things that have been researched, I realize that it's very beneficial. I'm excited about it. I think that I'm gonna enjoy taking part in it, if that's your question.

Ann had not been involved in any previous research and had gathered data only once during her

certification process a number of years earlier. When asked how she gathered information about her students, she said, "If I have a problem with a child or I want to know more about a child, I study the permanent record, I talk to the child, usually some parent contact. We don't have that much contact with former teachers."

As we began to discuss research questions, I asked her how I could help in developing the question and she responded, "I think first I'd like to know what is going on with the question and see where I can fit comfortably into that or see what feels comfortable for me. But I would more like the feedback on my approach to it and my class and how it works." She said that she hoped that the research would help her spend more one-on-one time with her students, as she often felt that she was teaching a class and not individuals. The discussion then moved to her individual question which she had been asked to consider prior to the interview. The following exchange is an example of the collaborative process at the individual level.

Dan: (referring to her individual research question) Where are you at this point?

Ann: I've tried to narrow down my individual question. I have actually come up with an individual question. I'm going to be teaching Social Studies, four classes, and I don't know so much that I want a kind of question having to do with the content as much as maybe methods. My thinking is along the lines of different learning styles and stuff like that.

Dan: If you were going to put that into a form of one question, what would it be?

Ann: (after she tried a few wordings) How can I vary my teaching to accommodate different learning styles and what are the effects of it once I do?

Dan: As an expansion on that question, I'm wondering, are you going to try to identify different learning styles in different students and then direct your attention to the different learning styles? Or, are you going to mentally have a group of learning styles into which 99% of the students would fit and then preplan your instruction so that you cover all those learning substyles?

Ann: The second.

Dan: Rather than trying to individualize a particular class, you would rather generalize into those categories that would cover most of the students.

Ann: Yes, and try to plan it so that I can cover more in one class period.

Dan: Would you define for me learning styles as you are thinking about them.

Ann: The method in which a child learns, be it auditorial or by doing something, or if they learn by experimentation, or whatever. Just the method in which the child learns, I guess.

Dan: That is a good start, please continue to define in your own mind just what you want to accomplish with this question and we will discuss it further next time.

In our next meeting, several weeks later, she came prepared with a question written down and had obviously been reflecting more thoroughly about what she wanted to accomplish during the research project. In a lengthy exchange she explained that she believed she was already teaching to the different learning styles she had mentioned earlier and that her real problem was how to teach the different subjects of social studies to the same class, with different learning styles in mind. As we narrowed our thinking into defining the question, this final exchange occurred,

Ann: I really don't want to change my teaching style, I really think I'm interested in how I structure the class and curriculum according to the different subjects keeping learning styles in mind.

Dan: What would you like to change concerning curriculum and instruction?

Ann: I know what I want to do; I just don't know how to do it. I would like to change the social studies I'm going to be doing next year. I would like for it to be a lot more hands-on, I'd like to be able to do it from a new approach of getting these skills instead of just a chronological study of history. I'd rather it be on a much higher level, I guess.

Dan: And how would you use hands-on, in other words, if we're going to manipulate these things and read this book and look at this map and globe to get the basic idea about relate, then what would you do with a hands-on approach to take that next step to application?

Ann: A lot of applying it to other situations. You know, getting a lot of comparative situations we're studying then and situations now, getting the hands-on, actually seeing how it works in real life, some of the different skills, like latitude or longitude or something like that. I mean, I really think they need practice finding these things and they need practice understanding and seeing that. With history, you know, there's so many ways to make that more higher-level thinking in comparing to situations today.

Dan: With that in mind, how would your modify your question to look at that.

Ann: I guess I am really looking at how I design my classes related to the different topics so my question should read, How can I design my social studies classes so that there is a blend of geography, history, and culture?

Group Findings

The next area of concern is group interactions and the group concepts of team teaching related to what the group believes teaching is. I begin with Ann's understanding of how the team worked together and perceived teaching during the study. Her responses typified the thinking of the group.

Dan Where's your focus when planning your curriculum and instruction?

Ann: Right now we're in transition between the mentality of, "What am I going to plan?" and, "I've got to teaching that and I've got to cover this, this, and this."

Dan: How do you feel about those transitions?

Ann: I feel great about it. It's time. I'm ready for that, but my planning is still a little bit in that old mentality of just going through the book and doing what we need to do or going through the syllabus.

Dan How does that fit into the team concept?

Ann We tend to give each other our academic time in the morning as much as possible. We got in the habit a couple years ago, because we were locked into a math schedule. We're not anymore, so I think we're very, very flexible. We don't change a whole lot; we still maintain some kind of schedule.

Dan: What would you like to change concerning curriculum and instruction?

Ann: I would like to change social studies I'm going to be doing next year. I would like for it to be a lot more hands-on, a lot more. I'd like to be able to do it from a new approach of having it be on a much more higher level, I guess.

Dan: And how would you use hands-on? What would you do?

Ann: A lot of it applying it to other situations, a lot of comparative situations, actually seeing how it works in real life, like latitude or longitude, I really think they need practice finding these things.

In summary, in the research project, there were some similarities among the teachers in the group. First, they all expressed an interest in doing this type of research, even with some reservations about their ability to complete it successfully. They all had an interest in improving as teachers and learning new things about their practice. Also, they all were open to feedback, expressing a desire for continual feedback about their performance related to the research. They all had problems developing and writing their individual research questions and needed guidance as described in Ann's case. In addition, however, they were all interested in finding answers to their individual questions and in using those answers in their future teaching. They were all concerned with benefitting the students through their efforts in this project. Finally, each teacher expressed an interest in staying current with the latest teaching research and believed this research would help them stay in touch with current trends in middle grades education.

Process, Cycle One

Ann's interaction with the group and the process by which she attempted to answer her individual question follow. Input by the other teachers (Kate, Bob, and Sue) in the group are

included where appropriate. Before the action research cycles began, our first group meetings were informal and a time of getting acquainted with action research, each other, and the project we were undertaking. I spent much of the sessions directing the group and explaining what to do next. Our primary goal was to brainstorm our research questions for the project. First, we completed the individual teacher questions, Ann's question was discussed in a personal interview with her above, which the teachers had been working on before the group meetings began. Next, we completed the group question for the study and discussed possible ways to attempt to answer the questions. Finally, I provided articles and books of recent research related to the topics of interest for each teacher. The teachers had several weeks before the project started to read research articles and books that they chose from a group I provided covering recent research pertaining to the subjects of the teachers individual questions. The readings allowed the teachers to become familiar with other research and research methods pertaining to their topics of interest before they began the research project.

Process Overview

The process of teacher team collaborative action research began in earnest at the beginning of cycle one. Characteristics of this research include (1) regular meetings of the collaborative group for planning and reflecting upon the research, (2) teachers conducting their own research in their individual classrooms, (3) design and direction of the research initiated by the university collaborator, but with group approval, and (4) movement toward autonomous continuation of future cycles of action research without the need for university personnel collaboration.

Group Dynamics

The focus of this part of the paper is on the process of the research and changes that occurred as a result of the research process. To that end I begin with an interchange of the group typical of group dynamics, edited to conserve space.

Dan: Let's continue with the question itself, and the question we have so far reads like this, "How can we help develop interpersonal skills in students and utilize these skills to foster a sense of community?"

Kate: I had forgotten that was the question. I knew it was about community.

Bob: Yeah, Ann wrote it down.

Dan: First of all, let's decide whether that we want to continue with the question.

Ann: I like that question.

Kate: I like that question.

Dan: I agree. We really have a couple of parts to this question: developing interpersonal skills; and fostering a sense of community. So the first thing that we might decide is how can we as a group can determine what state of interpersonal skills the students have the first few weeks? That's basically what we want to accomplish the first few weeks.

Sue: Should we come up with a survey?

Bob: Maybe we'd better define what some of the interpersonal skills are.

Kate: And what are we looking for?

Bob: For example, An interpersonal skill is....

Kate: How about "the ability to work together."

Bob: Or "friendships."

Ann: We can get some information, too, from the group processing we do.

Dan: Yeah, good idea.

Ann: You know, who got along, who didn't get along. Why you think they do.

Dan: Any input that you have in setting up the groups is real important in a lot of cases. Do you just let them group themselves or do you group them? And if you group them, how do you group them?

Bob: How much of this is going to be affected by just kids not knowing each other?

Ann: Because in 5th grade they come in and they don't speak for a week.

Bob: And they may have nothing for interpersonal skills, but they may be just timid.

Dan: Those are the kind of questions that we want to address.

Bob: We have to sort that out.

Ann: Yeah, but the state of their interpersonal skills now is that they're in these situations.

Sue: The ones that have the worst skills show up first. The most obvious ones.

Bob: The question is, how do we quantify it? Do we need to measure it somehow?

Dan: No, but you need to talk about it. You need to define it. You need to explain it or discuss it, if you can.

Ann: Could we be in a team meeting situation where we say, today in class we saw this, this, and this. I can tell right off this person is having trouble getting along with

these people. Is it an oral thing or does it have to be measured? Do we have to have a question that we answer or can it be our observation?

Dan: On a personal question, the answer would be yes. On a group question, I think we would want to get to some level of generalization or some level of consensus. Whether that be a discussion level or a number level doesn't matter.

Bob: You don't rate the individual then; you rate the group.

Dan: Yes. In other words, you're going to rate the individuals, but then you're going to bring to the group something that can be added to the group so we have four inputs which we pool and make a decision about this whole.

Kate: Do we need to come up with specific indicators that we can check for on each kid?

This exchange occured during a discussion of the group question, but was typical of group interactions. First, it is important to note the need for me, as collaborator to lead the discussion. The participants learned the process of the research by experiencing it and asking questions as they progressed. Second, the dynamics of the group allowed questions to be asked and clarification to occur simultaneously. Bob needed to understand how this research differed from the quantitative research he had been exposed to before, Ann needed to understand where the research question fit in, Sue wanted to define who we were studying, and Kate was unclear about what we were collecting as data. The group interaction allowed these different areas to be discussed jointly so that the process was understood by all. Third, the group stimulated new ideas and directions for the research. These important points were evident throughout the research process and major contributors in keeping the participants interested and motivated.

Group Interaction

The first cycle of the research was dedicated to learning the process through group interaction. The process of determining how to collect data was one important part of this group interaction. It was continually necessary to narrow the focus of the data collection and collectively determine how the process would occur. The following exchange is an edited example of how the group accomplished this task.

Dan: Let's frame three questions (addressing interpersonal skills).

Kate: We're going to start with cooperation, and I haven't thought through group stuff.

Ann: But you can watch them when they come in (homeroom). Okay, can we just say works together in cooperative group settings? That's kind of simple.

Sue: That's fine, isn't it?

Dan: The simpler the better.

Bob: Participates in cooperative group settings?

Ann: Yeah.

Sue: Yeah, but sometimes when they're participating they're really not working.

Ann: Yeah.

Kate When they participate is when they're in the group and they're doing something.

Ann: But what we're looking for is them working together. I mean, that's what we're trying to observe. I mean, it's really a semantic kind of thing.

Kate: Well, working together and participating is basically the same thing.

Sue: To me there's a difference. When I've got four kids in there, one of them is doing

his part, but he's not working with the others. He went to get the materials and he did his part. So he participated, but he didn't work with them.

Kate: We're thinking the same thing; we're just using different words.

Sue: Maybe there ought to be a word that gets past works and participates. How about works cooperatively?

Kate: Involves?

Dan: Sharing, Cooperating?

Sue: Because there's a difference between cooperative and just participates. So how about works cooperatively with group members?

Dan: Alright now, are we talking about any group or a cooperative group?

Kate: If he's assigned to a group, you know, he ought to cooperative with his group whether it's a cooperative group or not.

Bob: That's why in the first question it really needs to be works cooperatively in a cooperative group setting and then works cooperatively in a non-cooperative setting. Because I think there's a difference. There's definitely a difference.

Dan: Okay, is that two different questions that you want to address?

Bob: Don't you think so?

Ann: Yeah.

As the process progressed, I found that the process continually limited the teachers to what was really within reasonable time restraints. They would want to do more than there really would be time to accomplish, to ask five or seven questions when three would do, to form extra groups or

higher numbers of observations than would be needed to answer their questions, but the group interaction produced natural checks and balances which kept the teachers moving forward at a consistent pace. In addition to this type of limitation, the process of focusing our efforts was a natural consequence of the group dynamics and a direction developed that made it easy to funnel our efforts to a natural conclusion in the form of an instrument or intervention (action) that was specific to the individual (and therefore the group) questions.

In conclusion, what I have tried to indicate in this paper, which is a single example from a larger work (see Saurino, 1996), are two points of interest to those involved in middle grades education. First, action research, especially collaborative action research, is one effective tool in which middle grades teachers can grow professionally. It is a developmental instrument that helps teachers answer questions in their own practice while keeping them motivated through an interesting form of research that lends itself to their need for efficacy and simplicity. Second, the group aspect of teacher teams conducting collaborative action research adds another dynamic, that of group interaction providing an arena for questioning, brainstorming, discussing, limiting, and directing the research. Ann summed it up in one of her closing statements during our reflection meeting, "I can't believe how much I learned about my own classroom, and it was fun too!"

Recommendations For Future Research

I have discussed the basic process of conducting teacher team collaborative action research. The long term goal of my research is to lay a foundation for teacher team collaborative action research to be used as a staff development tool within middle grades school systems. To

that end, I challenge my colleagues interested in middle grades teacher development to join me in that quest. A variety of environments need to be tested to see how this process adapts itself to this ever changing field. Finally, the best aspect of this type of research is that those who will benefit the most from our efforts are middle grades students, during perhaps the last years of their lives when their teachers will be able to help set positive directions for the rest of their lives.

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